

FORT MCKINLEY,  
BATTERY BERRY OBSERVATION STATION  
North Side of Wood Side Drive approximately  
80 feet east of Spring Cove Land,  
on Great Diamond Island  
Portland  
Cumberland County  
Maine

HAER No. ME-59-B

HAER  
ME  
3-PORT  
27B-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Northeast Region  
Philadelphia Support Office  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, P.A. 19106

HAER  
ME  
3-PORT,  
27B-

**HISTORIC AMERICAN ENGINEERING RECORD  
FORT MCKINLEY,  
BATTERY BERRY OBSERVATION STATION**

**HAER No. ME-59-B**

**Location:**

Norht side of Wood Side Drive, approximately 80 feet  
east of Spring Cove Lane, on Great Diamond Island  
Portland, Cumberland County, Maine

UTM: 19.403810.4837510  
Quad: Portland East, ME, 1:24,000

**Date of Construction:**

1905 and 1907

**Architects & Engineers:**

Army Corps of Engineers

**Present Owners:**

McKinley Partners Limited Partnership

**Present Use:**

Vacant

**Significance:**

Fort McKinley attains significance as the largest of Portland Harbor's five military complexes built in the late 19th and early 20th centuries. The fort protected Maine's principal city with one of the most well-defended harbors in the country. Battery Berry Observation Station is one of seven such stations built at Fort McKinley between 1905 and 1909 to control and monitor gun fire from the fort's large batteries.

**Project Information:**

This is one of nine structures at the fort to be documented in accordance with the Memorandum of Agreement of 1989 as a mitigative measure prior to partial demolition of the structure.

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## LOCATION

Fort McKinley occupies the northern half of Great Diamond Island in Maine's Casco Bay and is a part of the City of Portland. The Battery Berry Observation Station is located on the North Fork of the island within bounds of Fort McKinley. It is set back from the road in a wooded area on the north side of Wood Side Drive, approximately 80' east of Spring Cove Lane, just south of Battery Berry.

## DESCRIPTION

Battery Berry Observation Station is in very poor condition, with sections of the roof missing or collapsed, areas of stucco fallen or cracked, and nearly all windows and doors removed or damaged. The building was constructed in two sections, the earliest being a square section at the north end that was constructed in 1905. The remainder was added in 1907.

The earlier section measures roughly 17' 11" square. It is partially set into a manmade hillside so that it is fully exposed at the south side (visible from within the addition) but only the upper half is visible from the north. Walls of the 1905 section are constructed of brick at the south and west elevations. The lower portions of the north and east elevations are also brick but the upper half are of poured concrete. The building rests on a concrete foundation. Fenestration consists of a central doorway flanked by two windows at the south elevation and one window centered on the west elevation. There is also a single long narrow window running along the width of both the north and east elevations at eye level (from the interior). The doorway is topped by a rough-cut granite lintel as is the window at the west elevation where there is also a rough-cut granite sill. The two windows at the south elevation are small square windows framed by molded wood trim. Instead of sash, these two contain interior wood shutters made up of diagonal boards. Similarly, the narrow windows have interior wood shutters and appear not to have been glazed at all. The doorway contains a four-panel wood door. No sash remains in the west window although it appears to have contained a wood double-hung sash. The structure is enclosed by an unusual roof system that consists of concrete trusses infilled with rows of purple glass cylinders. On the interior, the 1905 section has a combination of exposed brick and rough-plastered walls, a concrete floor, and the exposed ceiling system just described. The door and window openings are framed by molded wood trim.

The 1907 addition has an inverted U-shaped plan, with outside dimensions of roughly 53' x 18'. It was built using the Sewell method of construction. This technique uses cement plaster over steel mesh on a wood or steel frame. These buildings had concrete foundations and the unpainted exterior took on a cream or light tan color. The roof of the observation station addition is a shallow-pitched gable finished with tar & gravel. The northern half of the roof has collapsed. A sheet metal edging covers the rafter ends. The addition consists of three rooms: a central entry vestibule flanked by a plotting room to the north and a dormitory to the south. The entry to the building is located at the center of the west elevation. The doorway contains a five-panel wood door. Other fenestration includes four windows south of the entry and paired window to the north, two windows at the south elevation, and smaller square windows (one single, one paired, one tripartite) at the east elevation. There are also two windows set in the recess walls flanking the entry. Windows at the west and south elevations contained standard double-hung wood sash (none are intact but it appears that these were 15/15). Windows at the east elevation contained 15-pane casement sash (none are intact). Interior finishes consist of hardwood floors (nothing remains of the floor in the northern room), rough plaster walls, and pressed metal ceilings (most of which has fallen). Windows and doors are framed by molded wood trim. At some point a wood-frame tower was constructed near the center of the roof. It has since fallen and is now largely destroyed.

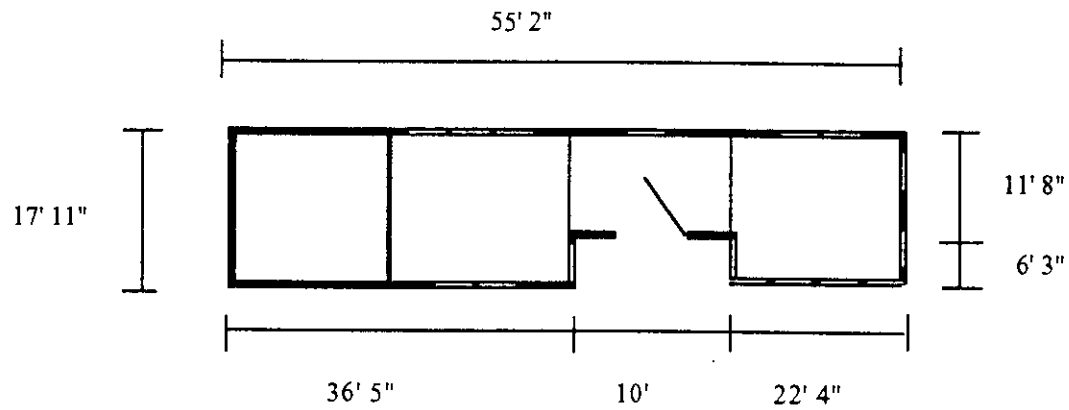
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## HISTORICAL BACKGROUND

Establishment of Fort McKinley was part of a larger effort by the government to provide strategic harbor defenses throughout the country, a practice begun in the late eighteenth century. Fort McKinley was the largest of four new fortifications established to protect the many avenues of entry into Portland Harbor at the turn-of-the-century. It was situated to deter entrance into the harbor from the north, particularly by way of Hussey Sound and Broad Sound. Plans for Fort McKinley included construction of nine gun batteries and facilities to mine the two major channels. To help control and monitor the firing of the guns, each battery had an observation station constructed nearby. These stations provided both range and directional information to the batteries. Battery Berry Observation Station is one of five such stations built at Fort McKinley in 1905 (two others were built in 1908). This station served nearby Battery Berry which held two 12 inch breechloading rifles mounted on disappearing carriages.

In 1905, under President Theodore Roosevelt, a board was appointed to evaluate the country's defenses. The Taft Board, headed by Secretary of War William H. Taft, made recommendations to improve the existing system for controlling the guns and mines. Rather than sighting guns directly, the board proposed to use a sophisticated observation system with optical instruments in the observation stations. Sightings would be sent by telephone into plotting rooms where the data was processed. In turn, ranges and directions were sent to the batteries. In response to the Taft Board recommendations, an addition was constructed onto Battery Berry Observation Station to supplement the existing operating room. The addition included a plotting room (north room) and dormitory (south room).

During WWII the Navy also established a strong presence in Portland Harbor, sharing responsibility for defense of the area with the Army. The Navy undertook a number of measures to supplement the work of the Army, including rigging submarine nets and sinking old ships between the islands and the mainland to completely enclose the harbor. By doing this, the batteries and mine casemates on the north and east shores of Fort McKinley were rendered superfluous. Consequently, only one battery at Fort McKinley needed to be manned. By 1943, as the threat of a major attack became unlikely, build-up of the coastal defenses greatly diminished and were virtually halted by 1940. Experiences during WWII, such as amphibious landings, air strikes, and the development of nuclear weapons and missiles all contributed to making harbor defenses like Fort McKinley obsolete. In 1950 the Coast Artillery was dissolved, the U.S. Army harbor defense commands were disbanded, and the forts were abandoned.



Battery Berry Observation Station  
Floor Plan  
[not to scale]

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Battery Berry Observation Station  
Original Plan at National Archives (file no. DR 10-79-42)

